SECURE ON-LINE, MULTI-ACCESS COMPUTER SYSTEM

ACTION COMPONENT(S):

An/ORD

USER COMPONENT(S):

CIA

OBJECTIVES:

It is the objective of this project to design, develop and put into experimental operation for testing and evaluation a secure on-line multi-access computer system. It is a design objective that the system be capable of carrying out intelligence processing operations in a time-shared mode with files at various security levels and with users having different security clearances at remote terminals all in a manner which adheres to the provisions and constraints of the Agency's security system.

DESCRIPTION:

The problem of adequate security for time-shared computer systems with remote terminals with users and files at various classification levels is difficult and severe. In addition to problems of emanations, physical security and user authentication at remote terminal locations, there are basic difficulties with the computer hardware and software now in use. Many of the present operating systems are vulnerable to programming changes from operator consoles. Also, hardware configurations using dynamic relocation do not provide a good basis for insuring that files at a certain level will be locked out from file data and users at different clearance levels.

Progress has been made in the past year or so in determining the important operational parameters for a time-shared computer system. Progress has been made in the development of computer operating and executive systems with improved characteristics for security. Improved methods for user authentication have been developed and peripheral equipment is now being produced with satisfactory emanation characteristics. It is the plan under this project to integrate all available resources into experimental operation for testing in a controlled situation. Experiments are planned to test

encryption processes between primary and secondary storage as well as the feasibility of storage or totally encrypted data as the hardware capability becomes available.

CHRONOLOGY:

Initiated: FY-66
Operational: FY-68
Operational Evaluation: FY-69 and ff.

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